

PROCESSES AND PROPERTIES INDEX

1ST AND 2ND EDITIONS

AND 4TH EDITIONS

2 b

Cd

The chemical composition of flax and causes of changes in composition. M. A. Solov'ev and A. V. Aleksceva. *Pr. Lubyanykh Tolokn* 1939, No. 11, 21-3; *Khim. Ref. Zhur.* 1940, No. 6, 46. -- Eighteen specimens of flax from 11 regions of the U. S. S. R. were analyzed. High contents of cellulose and wax-like substances are considered favorable, and high contents of substances removable by an aq.-alk. treatment, of ash and of N are unfavorable. The compn. varies considerably, except that the lignin content is nearly const. The method of the initial treatment of flax has a considerable effect on the compn. Chem. analyses of flax cannot be used as the basis for the classification of flax according to the geographical origin of its growth. W. R. Hein

ASTM-BL-A METALLOGICAL LITERATURE CLASSIFICATION

SEARCHED INDEXED

SERIALIZED FILED

MAY 1961

FBI - NEW YORK

SOBOLEV, M.A.

Determination of pectins. M. A. Sobolev and A. A. Krasivskaya. *Tekstil. Prom.* (1954).
The volumetric method devised for detn. of pectins (I) in cotton or flax is rapid and accurate. I is detd. by dissolving the pptd. Cu salt of pectic acid and titrating the liberated Cu with $\text{Na}_2\text{S}_2\text{O}_4$. To compare these results with those of currently used gravimetric method (Ca pectate) a conversion coeff. of 0.4 was detd. A 5-g. sample is soaked in 200 cc. distd. H_2O (500-ml. flask) for 18 hrs. at room temp. to remove all water-sol. compds. The soln. is filtered and the residue is washed 2-3 times with distd. H_2O . The residue is then refluxed for 2 hrs. with 200 cc. of 1% NH_4 citrate. The filtered sol. is brought up to 500 or 1000 cc. To a beaker contg. an aliquot of 100 or 200 cc. I is added 10 ml. 4% NaOH and after 14-16 hrs. the Cu pectate is pptd. by adding 50 ml. AcOH and 20 ml. 10% CuSO_4 . The filtered and washed ppt. is put into soln. by adding 3-4 drops concd. NH_4OH . To this soln., cooled to room temp., is added 15 ml. 2N H_2SO_4 and 5 g. KI ; after 3 min. it is titrated with 0.01N $\text{Na}_2\text{S}_2\text{O}_4$ with starch indicator. E. B.

SOBOLEV, M.A.; KRASIVSKAYA, A.A.

Molecular weight of flax pectin. Zhur. prikl. khim. 31 no.1:129-134
Ja '58. (MIRA 11:4)

1. Kostromskoy tekstil'nyy institut.
(Molecular weights) (Pectins)

SOBOLEV, M.A.; KRASIVSKAYA, A.A.; SHCHERBINA, V.I.

New method for the quantitative determination of cellulose. Izv.vyz.
ucheb.zav.;tekh.teskt.prom. no.5:106-109 '60. (MIRA 13:11)

1. Kostromskoy tekstil'nyy institut.
(Cellulose) (Textile fibers)

SOBOLEV, M.A., kand.tekhn.nauk, dots.

Methods for freeing fibers from flax stalks. Tekst.prom. 20
no.8:19-20 Ag '60. (MIRA 13:9)

1. Kostromskoy tekstil'nyy institut.
(Flax)

SOLOLEV, M.A.; CEKKER, P.A., retsenzent; VERBITSKAYA, Ye.M.,
red.; FYATRITSKIY, V.I., tekhn. red.

[Chemistry of flax and bast fiber materials] Khimiia l'na
i luhovoloknistykh materialov. Moskva, Gizlogprom, 1963.
140 p. (MIRA 16:12)
(Textile chemistry)

SOBOLEV, M.G., starshiy prepodavatel'

Sources of the financing of the repair of capital assets.

Tekst. prom. 24 no.9:12-15 S '64.

(MIRA 17:11)

1. Kostromskiy tekhnologicheskii institut.

SOBOLEV, M.G., inzhener.

Problem of reducing cost and increasing durability of moldboards.
Sel'khoz mashina no.1:30-31 Ja '54. (MLRA 7:1)

1. Zavod Rostsel'mash. (Flows)

SOBOLEV, M.G., inzhener.

Thread cutting axles of a KA stacker on a screw cutting machine.
Sel'khoz mashina no.11:31 № '54. (MLRA 7:11)
(Agricultural machinery) (Screw threads)

... , A.G.

Some shortcomings of the new accreditation course in the Black industry:
izv. vys. ucheb. zav.; tekhn. least. yedn. no. 3-9 1974. (1974 17:12)

1. Kostromskoy tekhnologicheskij institut.

SOBOLEV, M.G.

Organization of equipment repair and technical maintenance. Izv.
vys. ucheb. zav.; tekhn. tekst. prom. no.4:7-11 '65. (MIRA 18:9)

1. Kostromskoy tekhnologicheskiy institut.

SOBOLEV, M.G., starshiy prepodavatel'

Economic efficiency of the overhauling of machinery. Tekst.
prom. 25 no.4:8-10 Ap '65. (MIRA 18:5)

1. Kostromskiy tekhnologicheskii institut.

SECRET, A. 1.

"Selection of Sheep with Semifine Wool of the Korridel Breed for Meat and Wool Production." Iz Agr Sci, Moscow Pelt and Far Inst, Kuybyshev, 19.4. (KL, No 5, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13)
SU: Sum No. 598, 29 Jul 55

SOBOLEV, M.I.

AID P - 718

Subject : USSR/Electricity
Card 1/1 Pub. 29 - 11/26
Author : Sobolev, M. I., Eng.
Title : Operational experience with 110-kv transformers with
voltage regulation under load
Periodical : Energetik, 9, 17-18, S 1954
Abstract : The author briefly describes a transformer of the
TDTNG - 20,000/110-type. The voltage is regulated under
load. The 110-kv neutral is grounded through a valve
arrester of the RVS-35 type. The 3-year successful opera-
tion of the transformer suggests the possibility of chang-
ing operating instructions which were prescribed as obli-
gatory for such 110-kv transformers the direct grounding
of the neutral.
Institution : None
Submitted : No date

SOBOLEV, M.P., inzh.; POPOVA, N.E., kand.tekhn.nauk

High-frequency KV-12 telephone apparatus. Vest. sviazi 23 no.3:9-12
Mr '63. (MIRA 16:3)

(Telephone--Equipment and supplies)

MOSEL V, E. A.

"Method of Designing Power Modulation Transformers," Radiotekh 5-48, 3. Engr.

SARAYEV, Elena Vladimirovna; SARAYEV, Nikolay Dmitriyevich;

[brittle chrysotile asbestos] Lomkii khristofilastest.
Mskra, Nedra, 1965. 67 p. (MMA 18:6)

NETREBA, M.M.; SOBOLEV, M.Ya.; DOBRZHANSKAYA, M.V. (Khar'kov) /

"Pseudosyringomyelia" syndrome in periarthrits of the shoulder
joint. Vrach.delo no.1:141-143 Ja '63. (MIRA 16:2)

1. Tsentral'naya klinicheskaya psikhonevrologicheskaya i neyro-
khirurgicheskaya bol'nitsa Ministerstva putey soobshcheniya.
(SHOULDER—DISEASES) (SYRINGOMYELIA)

SOBOLEV, N., inzh.

The National Economic Council should be the only customer for dwellings.
Na stroi. Ros 4 no.1:8 Ja '63. (MIRA 16:3)
(Tula--Construction industry)

SOBOLEV, N.

On the road to efficient operation of ships. Mor. flot 25 no.7;
3-4 J1 '65. (MIRA 18:7)

1. Kapitan parokhoda "Admiral Nakhimov".

IDENTIFICATION, D.F.; 1-27-68. (C) 1-27-68. (C) 1-27-68.

Apparatus for manual transcription of film - (C) 1-27-68. (C) 1-27-68.
no. 4032484. (C) 1-27-68.

1. Description of apparatus - (C) 1-27-68. (C) 1-27-68.
Military, etc.

SOV/81-59-9-32068

Translation from: Referativnyy zhurnal Khimiya, 1959, Nr 9, p 355 (USSR)

AUTHOR: Sobolev, N.A.

TITLE: Hot Casting¹² of Ceramics Under Pressure

PERIODICAL: Tekhn.-ekon. byul. Sovnarkhoz Krasnoyarskogo ekon. adm. r-na, 1958,
Nr 3, pp 22 - 24

ABSTRACT: The process of manufacturing radio-parts by the method of hot casting under pressure is described. The advantages of this method in comparison with the method of pressing are indicated.

G. Maslennikova



Card 1/1

ABRAMOV, M.A.; ALIVERDIZADE, K.S.; AMIROV, Ye.M.; ARENSON, R.I.; ARSEN'YEV, S.I.; BAGDASAROV, R.M.; BAGDASAROV, G.A.; BADAMYANTS, A.A.; DANIYEL'YAN, G.N.; DZHAFAROV, A.A.; KAZAK, A.S.; KERCHENSKIY, M.M.; KONYUKHOV, S.I.; KRASNOBAYEV, A.V.; KURKOVSKIY, A.I.; LALAZAROV, G.S.; LARIONOV, Ye.P.; LISTENGARTEN, M.Ye.; LIVSHITS, B.L.; LISIKYAN, K.A.; LOGINOVSKIY, V.I.; LYSENKOVSKIY, P.S.; MOLCHANOV, G.V.; MAYDEL'MAN, N.M.; OKHON'KO, S.K.; ROMANIKHIN, V.A.; ROSIN, I.I.; RUSTAMOV, E.M.; SARKISOV, R.T.; SKRYPNIK, P.I.; SOBOLEV, N.A.; TARATUTA, R.N.; TVOROGOVA, L.M.; TER-GRIGORYAN, A.I.; USACHEV, V.I.; FAYN, B.P.; CHICHEROV, L.G.; SHAPIRO, Z.L.; SHEVCHUK, Yu.I.; TSUDIK, A.A.; ABUGOV, P.M., red.; MARTYNOVA, M.P., vedushchiy red.; DANIYEL'YAN, A.A.; TROFIMOV, A.V., tekhn.red.

[Oil field equipment; in six volumes] Neftianoe oborudovanie; v shesti tomakh. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gornotoplivnoi lit-ry. Vol.3. [Petroleum production equipment] Oborudovanie i instrument dlia dobychi nefti. 1960. 183 p. (MIRA 13:4)

(Oil fields--Equipment and supplies)

FUKS, Boris Abramovich, prof.; BAKHSHIYAN, F.A., prof.; ANDRIYEVSKIY,
F.P., dotsent; MIROSHKOV, R.K., dotsent; NAGAYEVA, V.M., dotsent;
SOBOLEV, N.A., dotsent; SOKOLOV, A.M., dotsent; SHAPIRO, Z.Ya..
dotsent; SHUSHARA, G.N., dotsent; KAPLAN, I.B., starshiy pre-
podavatel'; POLOZKOV, A.P., starshiy prepodavatel'; POLOZKOV,
D.P., starshiy prepodavatel'; TOPAZOV, N.G., starshiy prepoda-
vatel'; SHCHERBAKOV, S.S., starshiy prepodavatel'; Prinimali
uchastiye: GOL'DENVEYZER, A.L., prof.; BARANENKOV, G.S., dotsent;
BERMAN, Ya.R., dotsent; LUNTS, G.L., dotsent; SHESTAKOV, A.A.,
dotsent; GMURMAN, V.Ye., starshiy prepodavatel'; Rozental', M.I.,
assistent; SOKOLOVA, L.A., assistant. ROZANOVA, G.K., red.izd-va;
KUZ'MINA, N.S., tekhn.red. (Continued on next card)

FUKS, Boris Abramovich--(continued) Card 2.

[Higher mathematics; methodological instructions and control assignments for the students of correspondence technical schools of university level] Vysshiaia matematika; metodicheskie ukazaniia i kontrol'nye zadaniia dlia studentov zaochnykh vysshikh tekhnicheskikh uchebnykh zavedenii. Izd.9. Pod red. B.A.Fuksa. Moskva, Gos.izd-vo "Sovetskaiia nauka," 1958. 179 p. (MIRA 12:9)

1. Russia (1923- U.S.S.R.) Ministerstvo vysshego obrazovaniia. Metodicheskoye upravleniye. (Mathematics--Study and teaching)

SOBOLEV, N.A.; SHEFOV, A.S.; TOIMASOVA, V.N.

Near-the-threshold spectral sensitivity region of silver-oxygen-cesium photocathodes and its relation to the structure of the photosensitive film. Izv.AN SSSR, Ser.fiz. 26 no.11:1370-1376 (MIRA 15:12)
N '62. (Cathodes) (Photomicrography) (Spectrum analysis)

ZASOV, V.D.; SOBOLEV, N.A., dots, retsenzent; KAROYEV, Yu.I.,
dots., retsenzent; ZAKHAROVA, N.A., red.

[Projections with numerical marks; a book of problems]
Proektsii s chislovymi otmetkami; zadachnik. [n.p.]
Rosvuzizdat, 1963. 167 p. (MIRA 17:6)

1. Kafedra nachertatel'noy geometrii i grafiki Voenno-
inzhenernoy akademii im. Kuybysheva (for Sobolev). 2. Ka-
fedra nachertatel'noy geometrii Moskovskogo inzhenerno-
stroitel'nogo instituta (for Karoyev).

KHAGEMAN, R. [Hagemann, R.]; SOBOLEV, N.A. [translator]; ASTAUROV, B.L., red.; SYSINA, N.A., red.; KHOMYAKOV, A.D., tekhn. red.

[Plasmatic heredity] Plazmaticheskaia nasledstvennost'. Pod red.i s predisl. B.L.Astaurova. Moskva, Izd-vo inostr. lit-ry, 1962. 110 p. Translated from the German. (MIRA 16:4)

1. Chlen-korrespondent Akademii nauk SSSR (for Astaurov).
(Protoplasm) (Heredity)

СОНДЛЕВ, Николай Андреевич; ДАРХШИЯН, Э.А., доктор физ.-мат.
наук, проф.; отв. ред.; ГОНЧАРОВА, И.И.,

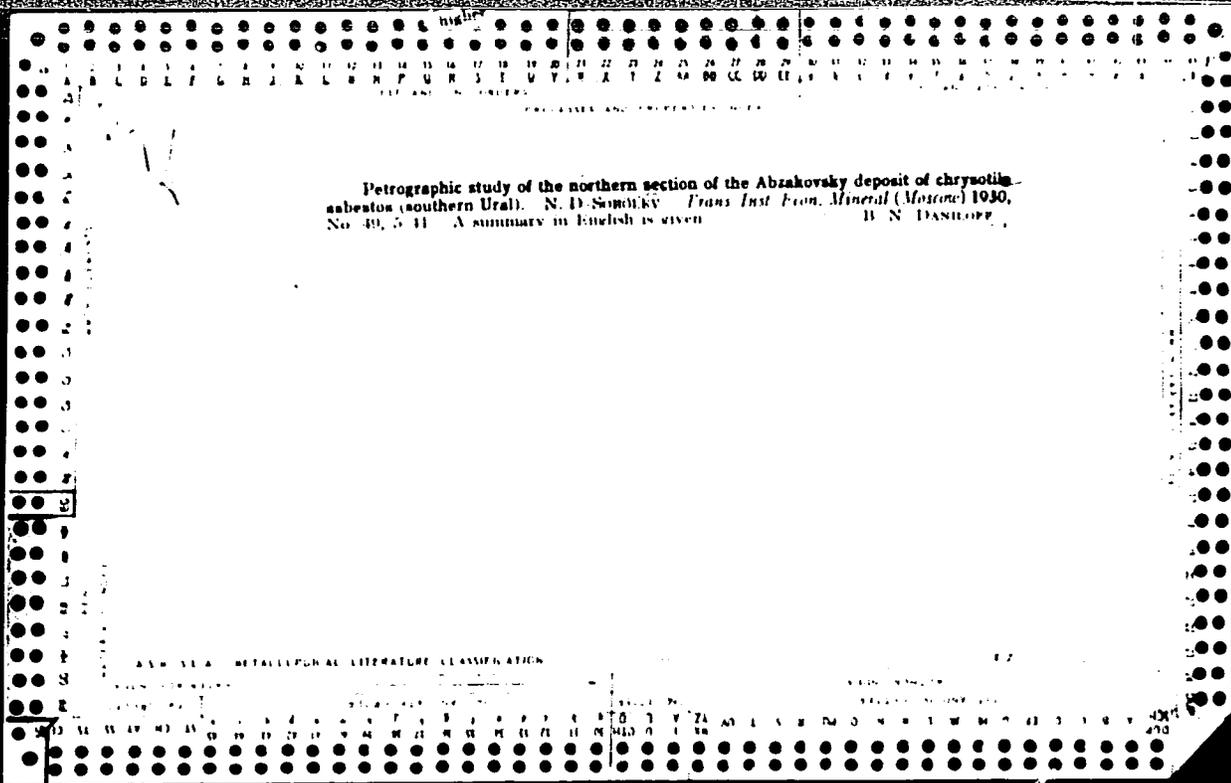
[Elements of vector algebra; textbook for a course in
higher mathematics] Elementy vektornoi algebry: uchebnoe
posobie po kursu vysshei matematiki. Moskva, Vses. za-
ochnyi politekh. in-t, 1961. 46 p. (NIAA 17:10)

ca

8

Chrysotile asbestos of Ichir deposits. N. D. SOMOLKIN *Mineralog. Zap.* 5, 1181-02 (1930).—Geological and mineralogical description of chrysotile asbestos at Ichir (Siberia) is given, together with chem. analyses, wt. sp. gr., thickness of fiber and mech. tests. The empirical formulas of asbestos were studied, and it was found that the brittle variety at this locality is characterized by higher SiO_2 and by the absence of replacement of Mg by H; it is a transition stage from asbestos to talc. B. N. D.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

TEST AND INSPECTION PROCESSES AND PROPERTIES

8

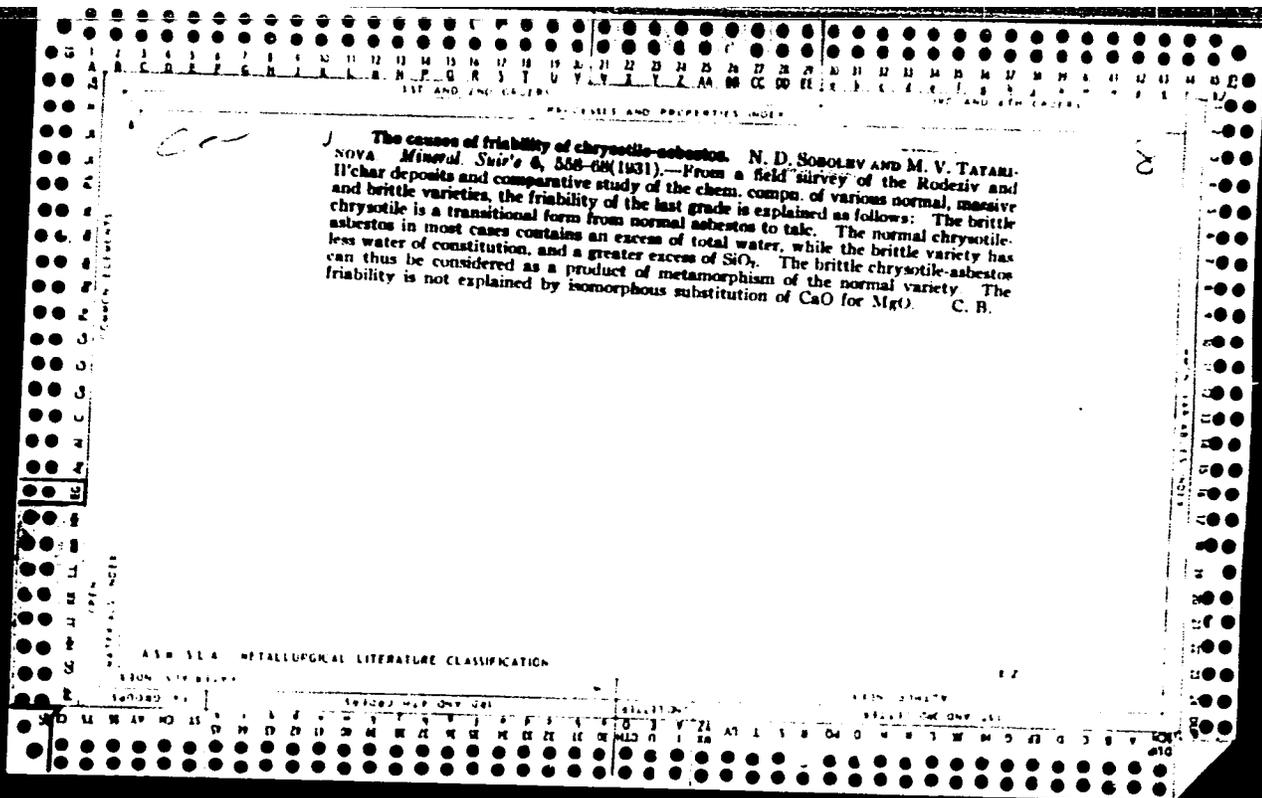
CO

Occurrence of chrysotile in Trans-Caucasia. N. D. SOBOLEV. *Mineral. Sibir'sk.* 1004 13(1930); *Chem. Zentr.* 1931, 1, 2033. --This asbestos deposit has no technical significance
M. G. MOORE

ASBESTOS

ASBESTOS METALLOGICAL LITERATURE CLASSIFICATION

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50



BC

A-1

Ferric iron as an index of serpentinization of ultrabasic rocks.
 N. D. Sobolev, (*Compt. rend. Acad. Sci. U.R.S.S.*, 1944, **42**, 301—
 303).—Chemical analyses (4 are recorded) of Caucasian ultrabasic
 rocks show that the greater is the [Fe^{III}] the more intense is the
 serpentinization of the rock. In serpentinized rocks the ratio
 Fe^{III}: Fe^{II} is ~1; in non-serpentinized rocks the Fe^{III} is ~1%, the
 rest being Fe^{II}. The magnetite (II) formed during the crystallisation
 of ultrabasic magma does not change during serpentinisation, and
 the Fe^{II} liberated during this change is oxidised not to (II), but to
 hematite. The oxidation of Fe^{II} may proceed according to the
 scheme $3Mg_2SiO_4 + Fe_2SiO_4 + 4H_2O + CO_2 \rightarrow 2H_2Mg_2Si_2O_7 + Fe_2O_3$
 + CO. L. S. T.

Base for Study of the North, AS USSR

CA

Microtexture of serpentinites. N. D. Sobolev, Dokl. Akad. Nauk SSSR 50, 157 (1955). The complex phenomenon of serpentinization of ultrabasic rocks was explained by Zayatskiy (1928) by the hypothesis that this process is a crystal from a gel, with the typical mesh textures of chrysotile fibers. The serpentinization is combined with an intense autometamorphism of the parent rocks which contain highly reactive agents. While the chrysotile aggregates are greenish or yellowish, an entirely colorless younger serpentine with antigorite is also observed in typical mesh textures, forming veins through the mass. Such serpentinites are intermediate to real antigorite serpentinites, which are colorless, and without any microtextures, but in scaly aggregates. The serpentine masses are often intersected by foreign magmatic vein rocks of a much younger age, or by veins with chlorite, garnet, and pyroxene. Tectonic fracture zones occur, along which fluid gaseous salts could circulate.

late. In these cases, the serpentinites are characterized by a dark-colored serpentine, with scaly antigorite, which does not show any marked microtexture. The textures and mineralizations indicate the transformation of older chrysotile serpentinites to antigorite serpentinites, through an "allometamorphism". This reaction type, however, is not generally predominant; there are also antigorites which originated directly from the primary olivine and pyroxenes. The variability observed in the optical properties of serpentinites, the frequently lacking regularity of their microtextures, and finally the formation of serpentinites from lizardites, which is just the reverse process, all these factors give an impression of how complicated the serpentinization must be, and how great the difficulties are

for an investigation of the successive reactions occurring in this process. W. Fiedler

SOBOLEV, N. D.

PA 9158

USSR/Asbestos
Mineral deposits

May 1947

"Chrysolite Asbestos in the Ilmen Mountains,"
N. D. Sobolev, 2 pp

"Doklady Akademii Nauk SSSR" Vol ⁵⁶~~XVI~~, No 5

Asbestos found one kilometer east of the southern
end of Lake Ishkul. Table showing chemical
composition of subject mineral

9T58

SOBOLEV, N. D.

PA 67422

USSR/Geology
Petrology

Jun 1947

"New Data on the Malka Serpentinite Massif and the
Iron Ores of Its Eroded Surface," N. D. Sobolev, 3 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVI, No 7

Gives newly established data on petrography of Malka
in North Caucasus, as follows: 1) in central part
of massif on northern and eastern borders, beneath
mesozoic deposits, there are only olivine and rhom-
bic pyroxene (39 forms); 2) found xenolite masses
in serpentinite massif of surrounding lower-
paleozoic clay shales several tens of meters long
and several meters wide.

60722

SOBOLEV, N. D.

7A3UT43

USSR/Geology
Mineral Deposits

Nov 1947

"Sungulite (Kol'skite) on the Kola Peninsula," N. D. Sobolev, 4 pp

"Dok Ak Nauk" Vol LVIII, No 5

During surveys of the mountainous regions around the Ensk iron ore deposits (Kola Peninsula) there were discovered veins and chunks of a scaly mineral, which was chalk colored, and widely cracked, thus permitting easy disintegration of the veins and chunks. Describes the chemical composition of this mineral and briefly discusses the nature of the deposits. Submitted by Academician D. S. Belyankin, 10 Jun 1947.

38

38T43

SOROLEV, N.D.

"Chemical Composition and Optical Properties of the Minerals of the Olivine Group in Region of the Enski Source," Dok. AN, 57, No. 6, 1947.

SOBOLEV, N.D.; SEMENOVA, M.V., redaktor; BORISOV, A.S., tekhnicheskii
redaktor.

[Ul'trabasic rocks of the Greater Caucasus] Ul'trabazity Bol'shogo
Kavkaza. Moskva, Gos. izd-vo geologicheskoi lit-ry, 1952. 238 p.
[Microfilm] (MLRA 7:8)
(Caucasus--Rocks, Igneous) (Rocks, Igneous--Caucasus)

SOBOLEV, N.D.

Autometamorphized granites. (In: Akademiia nauk SSSR. Voprosy
petrografii i mineralogii. Moskva, 1953. Vol. 1, p.76-83)
(MLRA 7:4)
(Granite)

SOBOLEV, N. D.

IA 245T52

USSR/Geophysics - Ultrabasic Rocks Jan/Feb 53

"Characteristics of Caucasian Ultrabasic Rocks," N. D. Sobolev

"Iz Ak Nauk, Ser Geolog" No 1, pp 140-157

Description of geology of subject ultrabasic rocks, their rock-forming minerals, chemical composition, and petrochemistry: also the micro texture of serpentinites, phases of serpentization of ultrabasic rocks, and metamorphism and weathering of serpentinites.

245T52

CHERNOSVITOV, Yu.L., glavnyy redaktor; SOLOV'YEV, D.V., redaktor; SOBOLEV, N.D., redaktor; SPIRINA, N.I., redaktor; POPOV, N.D., tekhnicheskiy redaktor

[Assaying minerals] Issledovanie mineral'nogo syr'ia. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geologii i okhrane neдр, 1955. 195 p.
[Microfilm] (MLRA 8:3)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.
(Mineralogy, Determinative)

JOEGLEV, H. D.

"The Classification of Granitoids."

A paper presented on 21 April, The Activity of the Moscow Society of Naturalists, Byulleten' Moskovskogo Obshchestva Ispytateley Prirody Vol LX.

No. 6, Moscow, Nov-Dec 1955, pp 80-90, Geology Section
Source: U-9235, 29 Nov 1956

SOBOLEV, N.D.

What is granite. Sov.geol. no.43:148-156 '55. (MLRA 8:9)
(Granite)

SOBOLEV, N.D.

"Eruptive rocks." A.N. Zavaritskii. Reviewed by N.D. Sobolev.
Izv. AN SSSR. Ser. geol. 21 no.5:104-108 My '56. (MLRA 9:8)
(Rocks, Igneous)(Zavaritskii, Aleksandr Nikolaevich, 1884-)

SOLOV'YEV, D.V.
ROZHKOVA, Ye.V., red.; SOBOL'EV, N.D., red.; SOLOV'YEV, D.V., red.; SULOYEV,
A.I., red.; CHERNO SVITOV, Yu.L., red.; VIASOVA, S.M., red. izd-va;
KRYNOCHKINA, K.V., tekhn. red.

[Methods of studying mineral ores] Metody issledovaniia mineral'nogo
syr'ia. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane
nedr, 1957. 138 p. (MIRA 11:4)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut
mineral'nogo syr'ia.
(Mineralogy)

SUBJECT: USSR/Geology 11-5-12/15

AUTHOR: Sobolev, N.D.

TITLE: Review of the book by Kadenskiy, A.A.: "Magmatic Geology of the Peredovoy Ridge in the North-Western Caucasus" (Retsenziya na knigu A.A. Kadenskogo: Magmaticheskaya geologiya Peredovogo khrebtta severo-zapadnogo Kavkaza")

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1957,#5, pp 111-115 (USSR)

ABSTRACT: The reviewer evaluates the book extremely negatively, pointing out numerous wrong statements, contradictions and other defects which it contains. In conclusion the reviewer writes that this book does not furnish any new data which are not contained in previous publications.

There are 7 references, all Slavic.

ASSOCIATION: Not indicated.

PRESENTED BY:

SUBMITTED: On 5 December 1956

AVAILABLE: At the Library of Congress.

Card 1/1

SOBOLEV, N.D.

More about ultrabasic rocks of the Greater Caucasus. Zap. Vses. min.
ob-va 86 no.1:141-144 '57. (MLBA 10:4)
(Caucasus--Rocks, Igneous)

SOBOLEV, N.D.; LEBEDEV-ZINOV'YEV, A.A.; NAZAROVA, L.S.; VILYUNOVA, L.P.;
BATALOV, Sh.S.; BRYLINA, O.M.; AFANAS'YEVA, L.K.; OVCHINNIKOVA, S.V.;
red.izd-va; OVANOVA, A.G., tekhn.red.

[Neogene intrusives and the pre-Mesozoic rocks in the region of Caucasian
mineral waters] Neogenovye intruzivny i mezozoiskii fundament raiona
Kavkazskikh mineral'nykh vod. Moskva, Gos.nauchno-tekhn.izd-vl lit-ry
po geol. i okhrane neдр, 1959. 208 p. (Moscow. Vsesoiuznyi nauchno-
issledovatel'skii institut mineral'nogo syr'ia. Trudy, no.3).

(MIRA 12:11)

(Caucasus, Northern--Rocks, Igneous)

SOBOLEV, N.D.

Quantitative mineralogical composition of granitoids. Sov.
geol. 2 no.3:57-70 Mr '59. (MIRA 12:6)

1. Vsesoyuznyy institut mineral'nogo syr'ya (VIMS).
(Granite--Analysis)

SOBOLEV, M.V.; SOBOLEV, N.D.

Genesis of blue rezhikite-asbestos deposits and prospecting
criteria. Sov.geol. 2 no.9:94-104 S '59. (MIRA 13:2)

1. Vsesoyuznyy institut mineral'nogo syr'ya (VIMS).
(Asbestos)

3(5)

SOV/11-59-10-11/16

AUTHOR: Sobolev, N.D.

TITLE: Neyvit - A New Rock from the Vein Rock Group

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1959, No. 10, pp 115-120 (USSR)

ABSTRACT: According to A.N. Zavaritskiy and G.L. Padalka, all ultrabasic rock formations of Urals form one single volcanic complex. It also contains numerous vein rocks of various composition, from ultrabasic to acid rocks. According to P.M. Tatarinov, all these rocks form three belts - western, central and eastern belts. In the central belt, the largest massif is composed of periodites and serpentines. It is intersected by many microdiorite and diorite-porphyrte veins, so-called by V.V. Arshinov, B.Ya. Merenkov and A.Ye. Makhalov. According to them, these veins are co-magmatic with the ultrabasic intrusion and form a part of the dunite-albitite, plagioclite and aplite series of vein rocks. Veins from the western belt, very similar to those of the central belt, were described by N.K. Vysotskiy as albite amphibolites and hornblende aplites. The

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SOV/11-59-10-11/16

Neyvit - A New Rock from the Vein Rock Group

aplite amphibolites were more often sheared, but there were also massive veins which intersect the enclosing rocks, thus indicating their magmatic origin. The hornblende content in the microdiorites is so high, and their crystal orientation so distinct, that these veins can also be classified as amphibolites. The diagram (figure 1) (compiled according to Zavaritskiy) based on the chemical analyses of amphibolites, microdiorites and albites, which are, according to the authors, albite-hornblende rocks, shows that these veins are rich in alkaline aluminosilicates, with predominance of sodium aluminosilicates, that is, of albites. On this diagram, the nearer to the axis S the rock is placed, the larger is the albite part in it; the farther it is - the larger hornblende content it has. Thus, according to A.N. Zavaritskiy, rocks with the albite part in them are called albitites and the other - hornblendites. Those between the two groups are called microdiorites. Their chemical characteristics are given (table 1 and 2). Metamorphic transformations are often observed between the microdiorites, hornblendites and albitites and between the albitites and ap-

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Neyvit - A New Rock from the Vein Rock Group

lites. The author's studies of various vein rocks also show that they were formed in two stages, the second stage being represented by small streaks of rocks formed in the fissures of the first stage veins. These streaks are composed either of porphyre or albite varieties. Xenoliths of the first stage rocks are also found in these second stage veins. The hornblende of the first stage rocks is replaced partly or completely by the zoisites in the zones of contact of both veins. This all, says the author, confirms the magmatic origin of these veins. The regularity of formation of all these veins, their magmatic origin and the metamorphic processes between the albitites, aplites and hornblendites permits to classify them as an independent vein rock group, which the author named "neyvites", their name deriving from the Neyva River where such rocks are in abundance. There are 2 tables, 2 diagrams and 7 Soviet references.

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SOV/11-59-10-11/16

Neyvit - A New Rock from the Vein Rock Group

ASSOCIATION: Vsesoyuznyy institut mineral'nogo syr'ya Ministerstva geologii
i okhrany neдр SSSR, Moskva (the All-Union Institute of Mineral
Raw Materials of the Ministry of Geology and Conservation of
Mineral Deposits of the USSR, Moscow)

SUBMITTED: January 30, 1958

Card 4/4

SOBOLEV, N.D.

Skarns and chlorite-garnets. Zap.Vses.min.ob-va 88 no.4:495-496 '59.
(MIRA 12:11)

1. Deystvitel'nyy chlen Vsesoyuznogo mineralogicheskogo obshchestva.
(Skarns) (Garnet)

SOBCLEV, N.D.; SCBOLEVA, M.V.

Genetic types of amphibole-bestos deposits. Raved. i
okh. nedr 26 no.2:1-9 Feb. '60. (MIRA 14:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo
syr'ya.

(Amphibole) (Asbestos)

SOBOLEV, N.D.

Genetic types of ultrabasic intrusions and the characteristics
of the distribution of minerals associated with them in the
U.S.S.R. Zakonom. razm. polezn. iskop. 6:32-47 '62.
(MIRA 16:6)

1. Vsesoyuznyy institut mineral'nogo syr'ya.
(Minerals) (Ultrabasicite)

SOBOLEV, N.D.

Recent intrusion in the Eastern Sayans. Izv.AN SSSR. Ser.geol.
27 no.2:103-107 F '62. (MIRA 15:1)

1. Vsesoyuznyy institut mineral'nogo syr'ya, Moskva.
(Sayan Mountains--Petrology)

S/210/63/000/001/002/003
E195/E135

AUTHOR: Sobolev, N.D.

TITLE: On the simalayer of the Earth

PERIODICAL: Geologiya i geofizika, no.1, 1963, 85-97

TEXT: On the assumption that meteorites are products of fragmentation of a former planet (Phaeton) similar in size to the Earth, conclusions are made as to the structure and composition of the sima layer of the Earth. Data on the compositions of 94 chondrites, obtained by H.C. Urey and H. Craig (Geochim. et Cosmochim. Acta, v.4, no.1/2, 1953) as well as those of 16 meteorites and 15 feldspar-free achondrites, are tabulated. According to their plessite contents, the chondrites can be subdivided into two groups: one group with 1 to 10% and the other 15 to 25% plessite. Their average virtual mineral composition is: spinellides 4%, monoclinic pyroxene 9%, orthorhombic pyroxene 55% and olivine 32%. The MgO : FeO ratio of all the chondrites with the exception of enstatites averages 3, but in enstatites it always exceeds 12. The achondrites are composed mainly of chladnites and they also contain amphoterites, chassignites,
Card 1/3

On the simalayer of the Earth

S/210/63/000/001/002/003
E195/E135

ureilites and bustite. For most achondrites the MgO : FeO ratio is similar to that of the chondrites (1 : 5); in some achondrites it exceeds 12. A predominance of orthorhombic pyroxenes and less than 3% spinellides are characteristic for the achondrites. Pallasites, which consist mainly of fosterite, do not contain pyroxenes or spinellides; the average MgO : FeO ratio in pallasites is 6. Conclusions: The mantle of the planet Phaeton before its fragmentation was sufficiently homogeneous - not differentiated in the Si section and divided in two zones: a top zone with 1 - 10% NiFe and a bottom zone with 15 - 25% NiFe. Assuming that the Earth and Phaeton were formed at the same time, and that the composition of their simalayers is identical, then the matter should have melted out of the Earth's simalayer from the time of fragmentation of the planet Phaeton. If the melting out process had reached its final product - dunite, up to 15% SiO₂ would have been released and the Earth's crust together with the sial and simalayer would be about 300 - 400 km and not of the order of 70 km. It is therefore concluded that the process of melting out of substance from the Earth's mantle is still in

Card 2/3

On the simalayer of the Earth

S/210/63/000/001/002/003
E195/E135

progress and that gases and low melting point components and their compounds with ores, rare and scattered chemical elements, are continuously being replenished from deeper strata. There are 4 figures and 3 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya, Moskva
(All-Union Scientific Research Institute of Mineral Raw Materials, Moscow)

SUBMITTED: July 10, 1961

Card 3/3

SOBOLEV, N.D.

Geological and economic evaluation of asbestos deposits. Razved.
i okh. nedr 30 no.7:1-3 31 '64.

(MIRA 17:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo
syr'ya.

SOBOLEV, N.D.

"Investigation of the effect of the Stressed State on Crack Formation in Steels Under the Combined Action of a Corrosive Medium and Mechanical Load." Thesis for degree of Cand. Technical Sci. Sub 3 Jul 50, Moscow Inst. of Chemical Machine Building

Summary 71, 4 Sep 52, Disse/rtations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva. Jan/Dec. 1950.

1A 1134

SOBOLEV, N. D.

USSR/Metals - Metallography

Sep 50

"New Method for Mounting Metallographic Specimens," N. D. Sobolev, B. N. Rutovskiy, G. S. Goncharov, K. V. Andrianova, Moscow Inst of Chem Mach Const

"Zavod Lab" Vol XVI, No 9, p 1134

Samples of metals to be studied are placed in glass vessel which is then filled out with methylmethacrylate, styrol or some other vinyl derivative with initiator preliminarily dissolved in it. Vessel must be closed and kept at temperature from 40 to 60° until polymerization process is completed and solid block is formed.

END

169T61

PA 236T64

USSR/Metallurgy - Cracking

Oct 52

"Influence of the Character of the Static Stressed State on Crack Formation in Metals in a Corrosive Medium," N. D. Sobolev

"Zhur'ekh Fiz" Vol 22, No 10, pp 1630-1643

Concludes that cracks always form on the surface of metals (steels) along the planes of maximum tensile stresses for any stressed state. Acknowledges guidance of Prof N. P. Shchapov. Cites related works of G. V. Akimov (Corrosion, 1946), Ya. B. Fridman

236T64

(Metals, 1946), V. N. Noyev (Boilers, 1947), N. N. Davidenkov (1936); also the English-language symposium Stress-Corrosion Cracking of Metals, ASTM, 1944.

236T64

SOBOLEV, N. D.

PA 252745

SOBOLEV, N. D.

1 Oct 52

USSR/Metallurgy - Fibers

"Most Advantageous Direction of Fibers in Articles Made of Anisotropic Materials," V.K. Grigorovich, N.D. Sobolev, and Ya.B. Fridman, Moscow Mech Inst and Second State Ball-Bearing Plant.

DAN SSSR, Vol 26, No 4, pp 703-706

State that anisotropy of the strength of metals possessing fibrous structure depends remarkably on directions of the fibers. Tabulate characteristics for various steels. Find that orientation

252745

of fibers along lines of max tensile strength should be considered during hot or mechanical treatment of metallic and nonmetallic articles Presented by Acad I.P. Bardin 8 Aug 52.

252745

FD 371

USSR/Physics - Stress Analysis, Strength of Solids

Card 1/1

Author : Sobolev, N. D. and Fridman, Ya. B.

Title : On the strength of bodies with variable mechanical properties

Periodical : Zhur. tekhn. fiz. 24, 479-498, Mar 1954

Abstract : Stating that, despite considerable development of methods for strength increase by using materials with high mechanical properties and by changing shape and manufacturing technology of products, insufficient attention has been paid to coordination of influences of various factors on strength, authors present analysis and evaluation of necessary conformity between "field of resistances," which characterizes variable mechanical properties, and "field of reduced stresses," which reflects varying distribution of stresses. Only some of the simplest cases, such as tension, compression, bending and torsion of bar, have been considered; but authors claim that conclusions and assumptions of this work may be further developed and applied for other more complicated cases. Twenty six references, 25 USSR, 1943-1953. Tables, graphs.

Institution :

Submitted : October 13, 1953

FRIDMAN, Ya.B.; SOBOLEV, N.D.

Estimating and increasing the strength of solids made of isotropic nonhomogeneous materials. Dokl.AN SSSR 105 no.6:1166-1169 D '55.
(MIRA 9:4)

L.Moskovskiy inzhenerne-fizicheskiy institut. Predstavlene akademikom M.V.Keldyshem.
(Strength of materials)

AL'TGAUZEN, O.N., kandidat fiziko-matematicheskikh nauk; BERNSHTEYN, M.L., kandidat tekhnicheskikh nauk; BLANTER, M.Ye., doktor tekhnicheskikh nauk; BOKSHTAYN, S.Z., doktor tekhnicheskikh nauk; BOLKHOVITINOVA, Ye.N., kandidat tekhnicheskikh nauk; BORZDYKA, A.M., doktor tekhnicheskikh nauk; BUNIN, K.P., doktor tekhnicheskikh nauk; VINOGRAD, M.I., kandidat tekhnicheskikh nauk; VOLOVIK, B.Ye., doktor tekhnicheskikh nauk [deceased]; GAMOV, M.I., inzhener; GELLER, Yu.A., doktor tekhnicheskikh nauk; GORELIK, S.S., kandidat tekhnicheskikh nauk; GOL'DENBERG, A.A., kandidat tekhnicheskikh nauk; GOTLIB, L.I., kandidat tekhnicheskikh nauk; GRIGOROVICH, V.K., kandidat tekhnicheskikh nauk; GULYAYEV, B.B., doktor tekhnicheskikh nauk; DOVGAL'EVSKIY, Ya.M., kandidat tekhnicheskikh nauk; DUDOVTS'EV, P.A., kandidat tekhnicheskikh nauk; KIDIN, I.N., doktor tekhnicheskikh nauk; KIPNIS, S.Kh., inzhener; KORITSKIY, V.G., kandidat tekhnicheskikh nauk; LANDA, A.F., doktor tekhnicheskikh nauk; LEYKIN, I.M., kandidat tekhnicheskikh nauk; LIVSHITS, L.S., kandidat tekhnicheskikh nauk; L'VOV, M.A., kandidat tekhnicheskikh nauk; MALYSHEV, K.A., kandidat tekhnicheskikh nauk; MEYERSON, G.A., doktor tekhnicheskikh nauk; MINKEVICH, A.N., kandidat tekhnicheskikh nauk; MOROZ, L.S., doktor tekhnicheskikh nauk; NATANSON, A.K., kandidat tekhnicheskikh nauk; NAKHIMOV, A.M., inzhener; NAKHIMOV, D.M., kandidat tekhnicheskikh nauk; POGODIN-ALEKSEYEV, G.I., doktor tekhnicheskikh nauk; POPOVA, N.M., kandidat tekhnicheskikh nauk; POPOV, A.A., kandidat tekhnicheskikh nauk; RAKHSHTADT, A.G., kandidat tekhnicheskikh nauk; ROGEL'BERG, I.L., kandidat tekhnicheskikh nauk;

(Continued on next card)

AL'TGAUZEN, O.N.---- (continued) Card 2.

SADOVSKIY, V.D., doktor tekhnicheskikh nauk; SALT'YKOV, S.A., inzhener; SOBOLEV, N.D., kandidat tekhnicheskikh nauk; SOLODIKHIN, A.G., kandidat tekhnicheskikh nauk; UMANSKIY, Ya.S., kandidat tekhnicheskikh nauk; UTEVSKIY, L.M., kandidat tekhnicheskikh nauk; FRIDMAN, Ya.B., doktor tekhnicheskikh nauk; KHIMYSHIN, F.F., kandidat tekhnicheskikh nauk; KHRUSHCHEV, M.M., doktor tekhnicheskikh nauk; CHERNASHKIN, V.G., kandidat tekhnicheskikh nauk; SHAPIRO, M.M., inzhener; SHKOL'NIK, L.M., kandidat tekhnicheskikh nauk; SHRAYBER, D.S., kandidat tekhnicheskikh nauk; SHCHAPOV, N.P., doktor tekhnicheskikh nauk; GUDTSOV, N.T., akademik, redaktor; GORODIN, A.M., redaktor izdatel'stva; VAYNSHTEYN, Ye.B., tekhnicheskii redaktor

[Physical metallurgy and the heat treatment of steel and iron; a reference book] Metallovedenie i termicheskaya obrabotka stali i chuguna; spravochnik. Pod red. N.T.Dudtsova, M.L.Bernshteina, A.G. Rakhshatda. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 1204 p. (MLRA 9:9)

1. Chlen -korrespondent Akademii nauk USSR (for Bunin)
(Steel--Heat treatment) (Iron--Heat treatment)
(Physical metallurgy)

FRIDMAN, Ya.B.; SOBOLEV, N.D.

On methods of estimating and increasing the strength of bodies
made of anisotropic materials. Dokl.AN SSSR 106 no.4:611-613
F '56. (MLRA 9:6)

1.Moskovskiy inzhenerno-fizicheskiy institut. Predstavleno aka-
demikom M.V.Keldyshem.
(Strength of materials) (Elasticity) (Anisotropy)

Sobolev, N. D.

57-10-11/33

AUTHOR: Sobolev, N. D.,

TITLE: On the Nature of Initial Destruction (O prirode nachal'nogo raz-rusheniya)

PERIODICAL: Zhurnal Tekhn. Fiz., 1957, Vol. 27, Nr 10, pp. 2273-2279, (USSR)

ABSTRACT: A short review of the papers dealing with this problem is given and shown that all these papers still do not have a sufficient argumentation in order to take another standpoint than that regarding the destruction mode of solid bodies as a double one in the investigation of the macroscopic picture of complete destruction as well as in the investigation of the initial stage of the destruction. However, it is pointed out that in dependence on the real load conditions in one case the tensile stresses, in the other case the tangential stresses can play a decisive rôle. Furthermore the analysis of the destruction breaks has to be carried out under taking into account of a variation possibility in the stress state in the course of the development of breaks. The picture of the final destruction which is assumed to be connected with the initial stress state cannot always be the basis for the evaluation of the destruction character. The most certain way for the determination of the picture of the initial destruction is a quantitative comparison of the real stress intensities at the moment of the occurrence of the initial destruction breaks in the case of different kinds of loads where the initial stress state is not distorted to a great extent.

Card 1/2

FRIDMAN, Ya.B.; SOBOLEV, N.D.; YEGOROV, V.I.

Testing for the thermal fatigue under pure shearing stress.
Zav.lab. no.4:467-472 '60. (MIRA 13:6)

1. Moskovskiy inzhenerno-fizicheskiy institut.
(Fatigue testing machines)

RELEASE: 08/25/2000

CIA-RDP86-00513R001651820013-4

S/126/60/001/017/025
E021/E335

AUTHOR: Sobolev, N.D.
TITLE:

The Influence of Inhomogeneity of the Stress Conditions
on the Processes of Prolonged Fracture

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol 9, Nr 5,
pp 758 - 767 (USSR)

ABSTRACT: An approximate analysis of the conditions for the development of one main crack in the process of fracture is given. For the evaluation of the possibility of complete fracture it is not enough to know the stress conditions in the region of the "danger" point in the stress field. A quantitative picture of the development of stresses and can be determined only if the distribution of stresses and the coefficient of damage K is known for each position of the developing crack. The time-to-fracture is determined by the mutual reaction of the initial stress field and the field created by the crack. The process of fracture can therefore be divided into three periods: the transition period; the period when the crack is being established and the final period. In the period when the crack is being established the rate of cracking is constant.

S/126/60/009/05/017/025

The Influence of Inhomogeneity of the ^{EO21/E325} Stress Conditions on the Processes of Prolonged Fracture

There are 8 figures, 1 table and 12 references, 3 of which are English and 9 Soviet.

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy institut
(Moscow Engineering-physics Institute)

SUBMITTED: August 12, 1959



Card 3/3

S/032/60/026/04/23/C46
B010/B006

AUTHORS: Fridman, Ya.B., Sobolev, N.D., Yegorov, V.I.

TITLE: Thermal Fatigue Tests Under Conditions of Pure Shearing Stresses

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 4, pp. 467-472

TEXT: Giving several examples, the state of stress in workpieces subjected to cyclic temperature variations is discussed. It is pointed out that all states of stress and deformation (monoaxial, biaxial, triaxial) can occur under the influence of temperatures realized under practical conditions. It would therefore be necessary to lay down the technical theory of strength, since the behavior of material in an arbitrary state of stress can, according to the well known criterion of strength, be determined from the test results of a simple state of stress. First experiments in this direction were made by Y.N. Kuznetsov (Ref. 2) and L. Goffin (Ref. 3). Kuznetsov regarded the deformation energy as criterion of strength. As the results obtained by the two investigators are in good agreement, it may be assumed that the deformation energy can be regarded as criterion of strength. In the present publication, a



Card 1/2

SOBOLEV, N.D., BORISOV, S.V.

Attachment to a tensile machine for tests at high
temperatures and in a vacuum. Zav.lab. 26 no.7:877-879
'60. (MIRA 13:7)

1. Moskovskiy inzhenerno-fizicheskiy institut.
(Testing machines)

SOBOLEV, N.D.

Dimensional effect in the processes of a long-period deformation.
Zav.lab. 26 no.9:1118-1123 '60. (MIRA 13:9)

1. Moskovskiy inzhenerno-fizicheskiy institut.
(Deformations (Mechanics))

23740

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2803, 1434, 1416

S/089/61/010/006/005/011
B136/B201

21.1300 (1138, 1425, 1504)

AUTHORS: Fridman, Ya. B., Sobolay, N. D., Borisov, S. V. Yegorov,
V. I., Konoplenko, V. P., Morozov, Ye. M. Shapovalov, L.A.
and Shorr, B. F.

TITLE: Some problems of thermal strength in reactor construction

PERIODICAL: Atomnaya energiya, v. 10, no. 6, 1961, 606 - 619

TEXT: The general idea of the failure of thermal strength includes two types of fracture: the gradual (subcritical) fracture as a consequence of an extreme deformation or of a great number of cracks or of large-sized cracks; causes and manifestations of those fractures are discussed, and the loss of elastic or plastic strength on the passage through the critical state. Either type of fracture may be brought about by four causes of stress: 1, mechanical or thermal shock stresses; 2, brief static loads for some minutes or hours; 3, static loads for some months or years; 4, periodic loads. Fig. 1 presents examples in the variation of elastic and plastic conditions in a tube, and a fictitious elastic tension is shown to arise in the plastic zone (dashed line), while the forms of mechanical

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S/089/61/010/006/005/011
B136/B201

Some problems of thermal strength ...

and thermal stress are intercompared in Fig. 4. Creep arises in nonuniformly heated structural elements, and cracks appear as a consequence of plastic deformation, particularly with materials having a low plasticity at room temperature. For calculating the creeping process the assumption is made on the basis of the creep theory that there is a functional relationship between the rate of creep v_i , the instantaneous stress σ_i , the temperature T , the time τ , and the plastic deformation P , namely,

$v_i = v_{i*} \left(\frac{P}{P_*} \right)^{-\alpha}$. Here, $P_* = \int_0^{\tau} v_i d\tau$; $v_{i*} = f_{i*}(\sigma_i, T)$; $P_* = f_*(\sigma_i, T)$. The thermal

fatigue fracture has much in common with the mechanical one. It can be therefore determined from the known mechanical properties of a material.

Whereas, however, the thermal fracture appears already after $10^3 - 10^4$ cycles, the mechanical one takes $10^7 - 10^8$ cycles to appear. A characteristic feature of the thermal fracture is the local deformation in zones with a particularly large temperature difference also in homogeneous fields of stress. This is also related to the appearance of high microstresses (Table 3). For sudden thermal shocks the temperature jump giving rise to a brittle fracture may

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B136/B201

Some problems of thermal strength ...

be estimated by an equation. Of importance in the practice, however, is the creep character and the durability of the material under combined mechanical and nonsteady thermal loads. Experimental results are illustrated in Fig. 9, where the curves of variation of length-versus-time (scale 400:1) are compared with the cyclic temperature curve II and the thermal and elastic deformation III. As opposed to combined stress conditions, in which the strain-stress characteristic concerned is worsened with increased temperatures, stresses in case of a purely thermal stress are of a thermal origin and lead to bulging of structural elements in the hot zones, without, however, causing their breakdown. The micromechanical properties were checked in two ways. The principle of the second is illustrated in Fig. 13, while the results of the former - for static

elongations and at 1400 - 1500°C in vacuum or in a controlled atmosphere, are presented in Fig. 12. In Fig. 13, 1 denotes the sample with a cross section of 2 X 1 or 3 X 1 mm, that is placed in a groove milled out from block 2. The pressure is yielded by stamp 3 made of tungsten briquettes 4. The resulting breakdown is indicated over contact 7. There are 13 figures, 3 tables, and 39 references: 27 Soviet-bloc and 12 non-Soviet-bloc. The three most recent references to English-language publications
Card 3/9

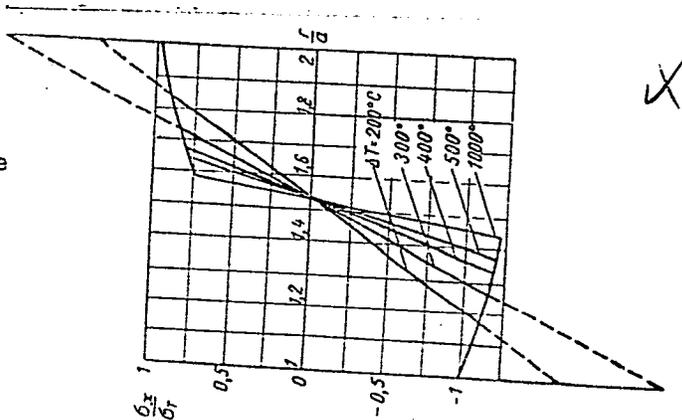
Some problems of thermal strength ...

23740
S/089/61/010/006/005/011
B136/B201

read as follows: Fracture, New York, Wiley and Sons, 1959; E. Sternbery, I. Chakravorty, Quart. Appl. Math., 17, no. 2, 205 (1959); E. Glenny et al. J. Inst. Metals, May (1959).

SUBMITTED: September 19, 1960

Legend to Fig. 1: Distribution of axial stresses and enlargement of the plastic zone in a thick-walled tube with various temperature jumps: r - radius of an arbitrary point; a - inner radius



Card 4/9

S/659/62/009/000/011/030
1003/1203

AUTHORS Yegorov, V. I. and Sobolev, N.D.
TITLE Investigation of the resistance to thermal fatigue under various conditions of stress
SOURCE Akademiya nauk SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam
v 9 1962. Materialy Nauchnoy sessii po zharoprochnym splavam (1961 g.), 81-88

TEXT Failures caused by thermal fatigue are of great importance in the construction of airplanes, rockets and thermonuclear installations. Thin-walled tubes of ЭИ-888 (EI-888) austenitic and ЭИ-852 (EI-852) steels were investigated for a temperature range from 650° to 250°C. The samples were heated by an electric current and cooled by a stream of air. The duration of one cycle was 30 sec. Heating by an electric current increases the sensitivity of the test because it causes overheating of the defective spots and therefore the failure of the sample takes place soon after the first crack occurs. In the discussion, Nikitina L. P. expressed the opinion that the heating-cooling cycles were too short, and that it may be necessary to keep the materials for a more prolonged time at the elevated temperatures for a truer evaluation of the thermal fatigue resistance. N. I. Kononchuk pointed out that it is not exactly clear what the authors mean by a failure, whether it is the occurrence of a crack or a breaking-up of the sample. He also sees no way of using the results of this investigation so as to include an evaluation of the strength of materials under different combinations of stresses. There are 2 figures and 1 table.

Card 1/1

LINES
S/032/62/028/010/007/009
B117/B186

17700

AUTHORS:
TITLE:

Sobolev, N. D., and Yegorov, V. I.

Methods of testing thermal fatigue in the case of uniaxial stress

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 10, 1962, 1238 - 1242

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TEXT: Testing methods were developed with allowance for the condition that the rates of mechanical deformation may be both smaller and greater than those of thermal deformation. First, if the mechanical deformation is equal to or smaller than the thermal deformation, a testing machine is used which is similar to that employed in tests with variable load rigidity (S. V. Serensen and P. I. Kotov. Zavodskaya laboratoriya, XXV, 10 (1959)). "Softer" load conditions with a free play between the sample and the clamping bolt or by using elastic elements (calibrated Belleville springs). Although the kind of deformation is different owing to the two types of load involved it does not affect the endurance of the sample before cracking. Evaluation of the total endurance indicates that load

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... N. D. Sobolev and ...
... 467 (1960)). There are

Card 1/3

Card

SOBOLEV, N.D.; YEGOROV, V.I.

The strength criterion in thermal fatigue. Dokl. AN SSSR
147 no.2:350-352 N '62. (MIRA 15:11)

1. Moskovskiy inzhenerno-fizicheskiy institut.
Predstavleno akademikom G.V. Kurdyumovym.
(Strength of materials)
(Metals--Fatigue)

YEGOROV, V.I., kand.tekhn.nauk; SOBOLEV, N.D., kand.tekhn.nauk

Studying thermal-fatigue strength of heat-resistant materials under variable stressed conditions. Izv.vys.ucheb.zav.; mashinostr. no.6: 29-39 '63. (MIRA 16:10)

1. Moskovskiy inzhenerno-fizicheskiy institut.

YEGOROV, V.I.; SOBOLEV, N.D.

Relative evaluation of the resistance of materials to thermal
fatigue. Zav. lab. 29 no.6:739-742 '63. (MIRA 16:6)

1. Moskovskiy inzhenerno-fizicheskij institut.
(Metals, Effect of temperature on)

SOBOLEV, N.D.; SOBOLEVA, M.V.

New manifestation of crocidolite-astbestos. Min. syst'e no. 3: 107-
109 '63. (NERA 17:9)

L 39992-65 EPR/EWT(m)/EWP(b)/T/EMA(d)/EWP(w)/EWP(t) EM/JD/GS

ACCESSION NR: AT5007860

S/0000/64/000/000/0211/0219

AUTHOR: Sobolev, N. D.

TITLE: Thermal fatigue 15

SOURCE: Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Tsentral'noye pravleniye. Voprosy mekhanicheskoy ustalosti (Problems in mechanical fatigue). Moscow, Izd-vo Mashinostroyeniye, 1964, 211-219

TOPIC TAGS: thermal fatigue, deformation, stress, strain, steel fatigue

ABSTRACT: On the basis of studies carried out at the Moskovskiy inzhenerno-fizicheskiy institut (Moscow Engineering Physics Institute), the author elucidates certain mechanical aspects of thermal fatigue. Since, for a given structural member, the magnitude of deformation depends not only on the temperature drop in this member but also on the conditions of deformation of adjacent members, the author shows diagrammatically that a distinction must be made between the effect of mechanical and thermal factors when studying the patterns of thermal fatigue. These factors can be separated by varying the strains under given temperature conditions and by changing the temperature cycles at a given value

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ACCESSION NR: AT5007860

of strain. The latter makes it possible to elicit the effect of various parameters of the temperature cycle on the resistance of materials to thermal fatigue. A comparison of the results of tests of steels in a uniaxial stressed state and with pure shear in the same temperature range with a wide change of the values of strain and stress showed that fracture from thermal fatigue is nicely described by the energy criteria of distortion, whereas a relative evaluation of the resistance of materials to thermal fatigue can be made by approximation criteria. Orig. art. has: 11 figures.

ASSOCIATION: None

SUBMITTED: 02Oct64

NO REF SOV: 009

ENCL: 00

OTHER: 000

SUB CODE: MM

Card 2/2 110

SOPOLIV, N.D.

Characteristics of the Molodezhnoye chrysolite-asbestos
deposit. Sov.geol. 8 no.11:71-77 N '65.

1. Vsesoyuznyy nauchno-issledovatel'skiy institut (MIRA 19:1)
mineral'nogo syr'ya.

ACC NR: AP0029057

(A)

SOURCE CODE: UR/0032/66/032/008/0984/0987

AUTHOR: Sobolev, N. D.; Pirogov, Ye. N.

ORG: Moscow Engineering-Physics Institute (Moskovskiy inzhenerno-fizicheskiy institut)

TITLE: A method for studying damage during thermal fatigue^{1b}

SOURCE: Zavodskaya laboratoriya, v. 32, no. 8, 1966, 984-987

TOPIC TAGS: thermal fatigue, alloy steel, electric circuit, plastic deformation, fatigue strength, fatigue test / EI847 steel

ABSTRACT: An experimental method was developed for studying cumulative damage during thermal fatigue. Experiments were made on tubular specimens ($d = 12.6/11$ mm) of EI847 steel, water quenched from 1150°C , and thermally cycled between 750 and 200°C . A schematic drawing of the electrical control circuit is given. The plastic strain per cycle ($\Delta\epsilon_p$) was calculated by subtracting the elastic from the total strain. This value was then plotted on a log-log scale as a function of the number of cycles to form visible cracking (N). With increased cycling $\Delta\epsilon_p$ diminished due to strain hardening, however, a linear dependence between $\lg \Delta\epsilon_p$ and $\lg N$ was established by using the method of least squares. Cumulative damage was studied by changing from $\Delta\epsilon_p = 0.48\%$ (II) to

UDC: 620.17

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~~SECRET~~ N. G.
PANTSER, Aleksandr Val'terovich; ~~SOBOLEV, Nikolay Grigor'evich~~ UT KIN,
N.A., redaktor; NIKOLAYEVA, I.I., redaktor izdatel'stva; BRATISHKO,
L.A., tekhnicheskij redaktor

[TL-4 winch apparatus] Agregatnye lebedki TL-4. Moskva, Goslesbum-
izdat, 1957. 95 p. (MLRA 10:8)
(Winches)

SOBOLEV, N. I., TREGUBOV, A. N. and POLIKARFOV, V. N.

"Insecticidal Properties of Preparations From the Sulfone Group".
Tr. Tsent. N.-I. Dezinfekts. In-ta, No. 8, pp 172-178, 1954.

Synthesized 13 compounds containing a sulfone group and tested their insecticidal properties on lice, flies, roaches, and ants. Chloromethylpara-chloro-phenylsulfone proved to be the most effective against lice and roaches. 10% dusts, soaps, and aerosols prepared from this compound have an activity close to that of DDT. (RZhKhim, No 4, 1955)

SO: Sum No 884, 9 Apr 1956

SOBOLEVA, N.I.; YEREMEYEVA, A.S.

Problem of Letterer-Siwe disease. Arkh.pat. 22 no.3:64-69
'60. (MIRA 13:12)

(LETTERER-SIWE DISEASE)

LIDES, Arnol'd Yakovlevich; SOBOLEV, N.I., retsenzent; IOKHVIDOV, E.S.,
red.; VORONIN, K.P., tekhn.red.

[Municipal electric networks] Gorodskie kommunal'nye
elektricheskie seti. Moskva, Gos.energ.izd-vo, 1959. 142 p.
(MIRA 12:8)

(Electric networks)

SOBOLEV, N. I.

PA 22/49T34

Periodical Abstract

USSR/Engineering
Rock-Wool Materials

Oct 48

"Factory for the Production of Rock-Wool Materials,"
N. I. Sobolev, Engr, 3 3/4 pp

"Mekh Stroi" No 10

Designs factory for processing rock-wool materials,
working three shifts and employing 100 hands.
Includes six drawings.

22/49T34

Sobolev, N.I.

PHASE I BOOK EXPLOITATION

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Sobolev, N.I., Candidate of Technical Sciences

Vosstanovleniye iznoshennykh otverstiy zapressovkoy svernutoy stal'noy lenty. (Reconditioning of Worn Holes by Press-lining with a Rolled Steel Strip). Leningrad, 1955. 14 p. (Series: Leningradskiy dom nauchno-tekhnicheskoy propagandy. Informatsionno-tekhnicheskiy listok, no. 90 /778/) 7,000 copies printed.

Sponsoring Agencies: Leningradskiy dom nauchno-tekhnicheskoy propagandy, and Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy.

Ed.: Posternyak, Ye.F., Engineer; Tech. Ed.: Freger, D.P.

PURPOSE: This pamphlet is intended for maintenance personnel responsible for the relining of worn cylinder walls.

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